

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Currently Amended) A centralized management authentication apparatus that performs centralized management of authentication to enable a wireless terminal apparatus to perform roaming on a plurality of wireless networks each having at least one radio base station, said centralized management authentication apparatus comprising:

an information acquirer that acquires service area information of each of the plurality of wireless networks and information of a current location of the wireless terminal apparatus;

an authentication information notification destination searcher that specifies at least one of the wireless networks that provides communication services in a peripheral area of the current location of the wireless terminal apparatus based on the acquired service area information and information of the current location; and

an authentication information manager that notifies ~~authentication information required for authentication of the wireless terminal apparatus to~~ only the at least one of the

wireless networks specified in the authentication information notification destination searcher of authentication information required for authentication of the wireless terminal apparatus before the wireless terminal apparatus moves to the at least one of the wireless networks, wherein:

the authentication information manager notifies the at least one wireless network of the authentication information each time the wireless terminal apparatus accesses the at least one wireless network or at a fixed interval.

2. (Original) The centralized management authentication apparatus according to claim 1, wherein the plurality of wireless networks has a cellular wireless network provided with a function of managing the location of the wireless terminal apparatus, and the authentication information notification destination searcher acquires the information of the current location of the wireless terminal apparatus from the cellular wireless network.

3. (Original) The centralized management authentication apparatus according to claim 1, wherein the authentication information manager notifies one of the wireless networks that requests the authentication information of the authentication

information generated by an authentication information generating apparatus of the cellular wireless network.

4. (Previously Presented) The centralized management authentication apparatus according to claim 2, wherein the authentication information notification destination searcher acquires the service area information of each wireless network of the plurality of wireless networks from the cellular wireless network.

5. (Previously Presented) The centralized management authentication apparatus according to claim 2, wherein a location management apparatus of the cellular wireless network manages the service area information and the information of the current location of the wireless terminal apparatus, and based on the service area information and wireless terminal location information managed by the location management apparatus of the cellular wireless network, the authentication information notification destination searcher specifies at least one wireless network of the plurality of wireless networks that provides communication services in a peripheral area of the current location of the wireless terminal apparatus.

6. (Original) A cellular wireless network comprising the centralized management authentication apparatus according to claim 1.

7. (Canceled).

8. (Withdrawn) A wireless terminal apparatus comprising:
a receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite;
a current location measure that measures a current location using the signal received from the GPS satellite; and
a current location information notifier that notifies a cellular wireless network of the current location measured in the current location measurer.

9. (Currently Amended and Withdrawn) A radio base station constituting a wireless network, said radio base station comprising comprising:

a receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite;
a current location measure that measures a current location using the signal received from the GPS satellite; and

a current location information notifier that notifies a cellular wireless network of the current location measured in the current location measurer.

10. (Canceled).

11. (Original) An authentication provider unit that manages entire wireless networks, comprising the centralized management authentication apparatus according to claim 1.

12. (Original) The authentication provider unit according to claim 11, further comprising:

a location management apparatus that manages the service area information of each of a plurality of wireless networks and current location information of a wireless terminal apparatus, wherein the location management apparatus acquires the location information of the wireless terminal apparatus from a cellular wireless network that performs location management of the wireless terminal apparatus.

13. (Canceled).

14. (Currently Amended) A wireless terminal authentication method in a wireless communication system comprised of a plurality of wireless networks each having at least one radio base station, said method comprising:

an information acquiring step of acquiring location information of a wireless terminal apparatus and service area information of each of the plurality of wireless networks;

an identifying step of identifying at least one of the wireless networks that provides communication services in a peripheral area of a location where the wireless terminal apparatus exists based on the acquired location information of the wireless terminal apparatus and service area information of each of the plurality of wireless networks; and

an authentication information notifying step of notifying only the identified wireless network of authentication information of the wireless terminal apparatus before the wireless terminal apparatus moves to the network, wherein

the wireless terminal apparatus notifies the identified wireless network of the authentication information each time the wireless terminal apparatus accesses the identified wireless network or at a fixed interval.

15. (New) A wireless communication system comprising:

a centralized management authentication apparatus that performs centralized management of authentication to enable a wireless terminal apparatus to perform roaming on a plurality of wireless networks each having at least one radio base station, said centralized management authentication apparatus comprising:

an information acquirer that acquires service area information of each of the plurality of wireless networks and information of a current location of the wireless terminal apparatus;

an authentication information notification destination searcher that specifies at least one of the wireless networks that provides communication services in a peripheral area of the current location of the wireless terminal apparatus based on the acquired service area information and information of the current location; and

an authentication information manager that notifies only the at least one of the wireless networks specified in the authentication information notification destination searcher of authentication information required for authentication of the wireless terminal apparatus before the wireless terminal apparatus moves to the at least one of the wireless networks, wherein:

the authentication information manager notifies the at least one wireless network of the authentication information each time the wireless terminal apparatus accesses the at least one wireless network or at a fixed interval; and an authentication apparatus comprising:

an authentication information holder that holds authentication information obtained by making a request for authentication information to the centralized management authentication apparatus; and

an authentication performer that uses the authentication information held in the authentication information holder in authentication of the wireless terminal apparatus in a service area of a movement destination when the wireless terminal apparatus moves between service areas of a wireless network to which the authentication apparatus belongs.

16. (New) A wireless communication system comprising:
an authentication provider unit comprising:

a centralized management authentication apparatus that performs centralized management of authentication to enable a wireless terminal apparatus to perform roaming on a plurality of wireless networks each having at least one

radio base station, said centralized management authentication apparatus comprising:

an information acquirer that acquires service area information of each of the plurality of wireless networks and information of a current location of the wireless terminal apparatus;

an authentication information notification destination searcher that specifies at least one of the wireless networks that provides communication services in a peripheral area of the current location of the wireless terminal apparatus based on the acquired service area information and information of the current location; and

an authentication information manager that notifies only the at least one of the wireless networks specified in the authentication information notification destination searcher of authentication information required for authentication of the wireless terminal apparatus before the wireless terminal apparatus moves to the at least one of the wireless networks, wherein:

the authentication information manager notifies the at least one wireless network of the authentication

information each time the wireless terminal apparatus accesses the at least one wireless network or at a fixed interval; and

an authentication apparatus comprising:

- an authentication information holder that holds authentication information obtained by making a request for authentication information to the centralized management authentication apparatus; and
- an authentication performer that uses the authentication information held in the authentication information holder in authentication of the wireless terminal apparatus in a service area of a movement destination when the wireless terminal apparatus moves between service areas of a wireless network to which the authentication apparatus belongs.